Chapter 6 Environmental Stewardship

In the preceding chapters, we discussed how to identify and address environmental threats. In this chapter we go a step further-how to prevent pollution by acting as responsible stewards of our environment. Guidance is provided on energy efficiency, recycling, and educational opportunities for your children and their families.

6.1 ENERGY EFFICIENCY

When you pay your gas or electric bill, you're not just paying for watts or BTUs. You're also paying for a piece of the planet. Electricity is derived from burning fossil fuels, such as coal, oil, uranium and natural gas. We all pay when we use up the Earth's natural resources. In many areas of the country, consumers are using alternative, renewable energy resources, from wind, water, or the sun, for example, but their use is still limited. The best way to save natural resources, and save money on your utility bills, is to use less energy. The following offers tips on energy conservation.

- **Conduct an energy audit.** Energy audits assess your facility's energy consumption and identify measures you can take to make it more energy efficient. You can conduct your own energy audit or hire a professional. See Chapter 7: Resources for information on professional energy audits. For a do-it-yourself audit, you can walk through your facility, keeping a checklist of areas you have inspected and problems found. This will help prioritize your energy efficiency upgrades. Inspect the areas listed below for air leaks. If you find air leaks, seal them properly with caulking, plugs, weather stripping, or other appropriate materials.
  - Windows
  - Doors
  - Electrical outlets
  - Switch plates
  - Window frames
  - Baseboards
  - Weather stripping
  - Fireplace dampers
  - Attic hatches
  - Wall- or window-mounted air conditioners
  - Around pipes
  - Around wires
  - Around electrical outlets
  - Around foundation seals.

  SAFETY NOTE: When sealing, always be aware of the dangers of indoor air pollution from gas-fueled appliances. In homes where a fuel is burned, e.g. natural gas, fuel oil, propane, or firewood) for heating, the appliance must be installed properly to have adequate outdoor ventilation.

- **Insulate properly.** Heat loss through ceilings and walls in your facility can be large if the insulation level is less than the recommended minimum. Check to see if the level of the attic and wall insulation is at least at the minimum recommended amount, which may be different today than when your facility was constructed. The Energy Efficiency and Renewable Energy Network (EREN) of the U.S. Department of Energy can help you evaluate your insulation level (See Chapter 7: Resources). To avoid fire hazards, allow a three-inch space between insulation and light fixtures, unless the fixture is IC (insulation covered) rated. If your basement is unheated, there should be insulation under the floors covering the basement. If your basement is heated, the walls should be insulated properly. Water heaters, hot water pipes, and furnace ducts also should be insulated.

SAFETY NOTE: In many older buildings, pipe insulation contains asbestos. Do NOT disturb this insulation (see Chapter 2.2 for more information on asbestos)!! When asbestos is disturbed, it may become friable, which is an extremely dangerous health hazard. Only licensed asbestos professionals should work with asbestos-containing materials!

‘ **Maintain heating and cooling equipment.** Inspect heating and cooling equipment annually, or as recommended by the manufacturer. If you have a forced-air furnace, check and replace filters regularly. Generally, filters should be changed about once every month or two, especially during periods of high usage. A professional should check and clean HVAC equipment annually. If the unit is more than 15 years old, consider replacing it with newer, energy-efficient units. Also, check duct work for dirt streaks, especially near the seams. Dirt streaks indicate air leaks, which should be sealed with metal-backed duct tape or a duct mastic. Insulate any ducts or pipes that travel through unheated spaces.

‘ **Use low-wattage and low-mercury lighting.** Lighting accounts for 20-25% of electricity consumed in the United States. Examine the wattage size of your bulbs. Do you really need that much wattage to light each room efficiently? Common fluorescent tubes need ballasts (pre-1976 models may contain PCBs-see Chapter 2.7 for more information) for starting. The electrical current in a flourescent tube is conducted through inert gases and mercury, which is a toxic substance when released if the tube breaks. Since fluorescent tubes contain this hazardous material, you should not dispose of burned-out lamps in the regular trash. (See Chapter 7: Resources for fluorescent tube recycling options.) Contact your local solid waste management district for guidance on recycling fluorescent bulbs in your area.

Compact fluorescent lamps (CFL) are the most significant lighting advance developed in recent years. They combine the efficiency of fluorescent lighting with the convenience and popularity of incandescent fixtures. CFLs can replace incandescent bulbs that are roughly three to four times their wattage, saving up to 75% of the initial lighting energy. Although CFLs cost from 10 to 20 times more than comparable incandescent bulbs, they last 10 to 15 times as long. This energy savings and superior longevity make CFLs one the best energy efficiency investments available. They are most efficient in areas where lights are on for hours at a time. Check with your electric utility to see if it offers rebates or other incentives for purchasing these and other energy-efficient bulbs.

6.2 RECYCLING

The 3-Rs you learned in school also apply to conserving resources and keeping waste out of Indiana's landfills. This section discusses the environmental 3-Rs: Reduce, Reuse, and Recycle. Some trash facts:

< The typical American generates about 4.4 pounds of garbage per day (U.S. EPA, 1996).
< A high percentage of what we throw away is RECYCLABLE!
< Packaging alone accounts for almost one-third of municipal solid waste.
< By following the 3-Rs, we all can reduce the waste stream significantly, prevent pollution, and conserve our natural resources. The "Rs" are listed in order of impact, with the greatest impact first.

REDUCE

‘ Reduce packaging by buying in bulk or economy-size packages.
‘ Choose products in refillable, instead of single-use, containers.
‘ Buy concentrated products and mix in refillable containers (label all chemical containers properly and keep them out of children's reach).
‘ Avoid disposable products when possible.
‘ Bring your own cloth, string, or paper bags to the supermarket.
‘ Print on both sides of paper.

REUSE

‘ Use products that are made to be reused such as cloth diapers, towels, and rags.
‘ Use clean milk cartons or the unused side of paper for scratch paper or art projects.
‘ Mend, give away or reuse old clothes as rags or as painting attire rather than throw them away.
‘ Repair broken appliances.
‘ Purchase goods at second-hand stores, junk yards, or yard sales to reduce unnecessary production.

RECYCLE

Recycling begins in the store when we choose products packaged in or made from recycled or recyclable materials. Contact your local solid waste management district to learn what contractors will pick up in your area or what you can drop off (see Chapter 7: Resources). The district also may be able to pair you up with a neighboring business that will take your recyclables, such as soft drink cans or cardboard, as a community service. Common recyclables include:

‘ aluminum beverage or food cans
‘ glass bottles and jars
‘ plastic milk and water jugs
‘ plastic drink and detergent bottles
‘ steel food cans
‘ newspapers and magazines
‘ paper and corrugated boxes

Many solid waste management districts also accept hazardous waste, such as fluorescent bulbs or paint cans, but businesses usually have to pay to dispose of these hazardous wastes.

BUY RECYCLED

The proof that recycling really pays for the environment is that the paper, plastic, metal, and glass we've been recycling is being re-manufactured into new products. However, the only way industry will continue to invest the necessary time and money to manufacture these recycled products is if people

purchase them. By purchasing recycled products you help increase the market demand for recyclable materials, while reducing the need for raw, virgin materials.

This symbol means the product or packaging contains recycled material. These types of products and packaging usually list their recycled content. But beware-this symbol doesn't necessarily mean that a product has any "post-consumer" recycled content, which means the material was already used, then recycled. Look for the percentages of post-consumer content. Compare labels to find the product or packaging with the highest percentage post-consumer recycled content.

More tips on buying recycled:

- Read labels. Look for the words recycled content or made from recycled materials.
- Ask the businesses where you shop what recycled-content products they stock. Let them know you recycle and that you want to buy recycled-content products. Encourage store managers to order more.
- Call manufacturers to express your preferences, also. Package labels usually include the product-makers' toll-free number.

WHAT CAN I BUY RECYCLED?

Office and classroom supplies. Almost every kind of paper product is available with recycled content. Along with paper, consider these other recycled-content products: binders, calendars, computer disks, desktop accessories, file folders, paper clips, pencils, pens, self-stick notes, staplers, trash bags, and more. With the increased demand for recycled products, many supply catalogs are offering more products with recycled content.

Outdoor equipment. Bird feeders, playground equipment, recycled plastic picnic tables, lawn furniture, rubber mats, rubber soaker and garden hoses, wood chips, sand boxes, trash and recycling receptacles, crumb rubber tire playground material, mulch, and steel lawn implements are just a few of the outdoor products made with recycled materials that are available.

Remodeling materials. There are a number of recycled-content materials that can be used for construction or remodeling, including glass counter top tiles, carpet made from recycled plastic soda bottles, and insulation made from newspaper.

Many "Buy Recycled" resources exist! Please see Chapter 7: Resources for contacts.

6.3 EDUCATIONAL PROGRAMS FOR CHILDREN

Teaching children early about the importance of caring for their Earth is a lesson they will carry through their lives. This section provides programs for child care teachers to begin using immediately, as well as references and resources to obtain educational materials. Included are stories that teach children about the environment, games, activities, and additional environmental education resources.

Story Time

Story time is a great time to teach kids about the environment. Many children's book authors have written stories that teach children the importance of a healthy environment for people, plants, and animals. Many of these books can be found electronically as well as in hard copy. Here are two lists of children's books with environmental themes. These lists are included as information only. IDEM does not endorse any of these materials.

The first is a list of books in print that can be purchased at a bookstore or the publisher, or borrowed from your local library. You can ask your library to carry these books if they don't have them.

These book can be purchased through the Sierra Club at http://www.sierraclub.org/books or by calling (800) 935-1056:

- **African Animals ABC**, by Philippa-Alys Brown.
- **My First Nature Treasury**, by Lizann Flatt.
- **What About Ladybugs?**, by Celia Godkin
- **Who Lives Here?**, by Maggie Silver

At the library or bookstore:

- **The Lorax**, by Dr. Seuss
- **Circle of Seasons**, by Myra Cohn Livingston
- **The Wump World,** by Bill Peet

Electronic Books Online:

- **Adventures of the Garbage Gremlin**, U.S. EPA at http://www.epa.gov/epaoswer/non-hw/recycle/gremlin/ , or can be ordered by calling (800) 490-9198 (order #EPA530SW90024).
- **When Greenville Turned Brown**, U.S. EPA at http://www.epa.gov/superfund/oerr/comtools/green/page1.htm.
- **Brucie and the Gang Protecting the Rivers**, by Southland Regional Council at http://www.southnet.co.nz/brucie/html/river_protection.htm.

Environmentally Focused Activities

Games and fun activities are another way to teach children about the environment. Games keep the activities fun while the learning occurs. It's easy to turn any game into an environmental lesson.

< Treasure Hunt: Have children pretend they are animals looking for food, identifying different aspects of their natural environment or searching for materials that can be recycled.
< Trash Pick Up: Have a pick up time, where the children pick up litter. Make sure there are no sharp or dangerous objects and children wash their hands thoroughly afterward.
< Finger Painting: During finger painting, children can paint environmental scenes, such as animals that live in the water, on land, or in the air.

Other games and activities that are designed to teach about the environment (see Chapter 7: Resources to find these games at U.S. EPA):

< The Lorax's Save the Trees Game. Available online only at http://www.randomhouse.com/seussville/games/lorax.
< What's Wrong with This Picture? U.S. EPA
< Smell an Onion, U.S. EPA
< Recycling Maze: Help Smogbusters Find the Recycling Center, U.S. EPA
< Incredible Edible Chemical Landfill, U.S. EPA
< Crafts from Unwanted Items, U.S. EPA
< A World Fit for Chipmunks and Other Living Things, Story and Coloring Book, U.S. EPA
< The Happy Earth Day Coloring and Activity Book, U.S. EPA. Available online at http://www.epa.gov/region5/happy.htm , or can be ordered by calling (800) 490-9198 (order # 905-M90-002).

Finding Environmental Education Materials

Here are a few examples of where to look for additional environmental educational materials:

< U.S. EPA Teachers Lounge - Resources. Online at http://www.epa.gov/region7/kids/teachres.htm.
< U.S. EPA environmental curricula. Online at http://www.epa.gov/epahome/students.htm.
< Acorn Naturalist: Children's Environmental Literature Books. Catalogue online at http://acorn-group.com/p7229.htm , or call (800) 422-8886.
< Kids for a Clean Environment, Energy Education Resources Guide. Free membership to children and teachers. Online at http://solstice.crest.org/social/eerg/kface.html , or call (800) 952-3223.

6.4 EDUCATIONAL PROGRAMS FOR FAMILIES

Following are suggested guidelines and formats to educate your children's families about environmental issues. Included are tips for writing letters to parents about environmental threats at the facility and in their homes, suggestions for conducting evening workshops, and suggestions for producing newsletter articles.

Informing Parents of Environmental Hazards at the Child Care Facility
Even after performing self assessments, changing behaviors, and correcting problems, environmental hazards still may be present at a child care facility. When this happens, child care workers may need to inform parents of the potential hazards to their children. There are productive ways of informing parents about risks without inciting drastic reactions. The following tips are a guideline for child care facility directors to use when writing a letter to parents to notify them of a potential environmental hazard at the child care facility.

Tips for Informing Parents of Environmental Hazards

1. Meet the needs of your audience.

Think about what parents need to know and address parents' concerns. Introduce the hazard briefly then address parents' concerns. Parents likely will want to know if their child already has been affected, what the potential effects are on their child, and if there are symptoms for which they should be looking. Expect that their first question will be: Is my child safe at your facility? They also will need to know if their child care will be affected. Will the facility still be open? Do they need to make alternative arrangements, or will the facility make the arrangements? These issues should be addressed first.

2. Explain the hazard.

The next section of the letter should address the hazard itself. Chapters 2 and 3 of this guidance manual provide information on many environmental, health, and safety hazards that could exist in child care facilities; however, you may want more guidance. The U.S. Environmental Protection Agency (EPA) and the Indiana Department of Environmental Management (IDEM) can help. The EPA provides fact sheets and brochures on many environmental problems online at http://www.epa.gov, try looking under the heading "concerned citizens." If you do not have Internet access, IDEM has a fax-on-demand system that allows callers to request information that can be faxed to them (see Chapter 7: Resources).

When explaining environmental hazards, remember to include the following information:

- *What is the hazard?* Give a definition and the cause of the hazard.
- *What are the possible health effects?* Be sure to include symptoms that parents may want to check for in their children. If possible, try to include the range of symptoms. For example, "In mild cases look for these symptoms...; in severe cases look for these symptoms... ."
- *What can be done about the hazard?* This section would include explanations of tests to detect the health problem or to detect if the child was exposed. In some cases, describe the treatments for health effects, if feasible.

3. Explain actions to reduce the hazard.

Although it may be tempting to discuss the actions that the facility is taking to address the hazard earlier in the letter, these actions will be perceived as more logical and more responsive if discussed after the

hazard is explained. This section will describe your response to the problem. Are you changing the water supply? Will you be modifying staff behaviors to reduce the risk? Is a licensed contractor encapsulating the asbestos? Are you covering lead-based paint? Do parents need to take action to reduce the problem? Or, does the facility need to close for a period of time to install new equipment?

If appropriate, also discuss what parents can do to help reduce the risk. Is the problem something that parents may be facing in their homes? Are there precautions that will help reduce risk? For example, eating certain foods can help protect children from having high blood lead levels, or flushing out cold drinking water for 30 seconds each morning can help prevent lead contamination.

4. Provide an outside source of information.

Parents will undoubtedly have questions. Many of their questions may be beyond the ability of your staff to answer. Also, your facility will appear more credible if it willing to provide outside sources of information. Local health departments, doctors, IDEM, and the U.S. EPA all are good sources of information for environmental hazards. Many hazards, like lead and radon, have hotlines to call for questions or additional information. Be sure to provide phone numbers in your letter. If possible, include informational pamphlets or brochures with your letter. See Chapter 7: Resources for ideas.

5. Be accessible.

Be sure to include a phone number and times when the person signing the letter can be reached for questions or more information. Your letter and your word will appear more credible if you are accessible.

Evening Workshops

Holding evening workshops can be an excellent tool to educate parents about environmental issues, and much more. Evening workshops will help parents and child care staff get to know each other better and interact more. It also will help parents become more comfortable with their child care providers. Interactions through evening workshops can show parents that you are concerned not only about their children's health while at the facility, but also about the health of their families at home. Following are two ideas to organize evening workshops for parents.

Issue of the Month

One way to organize evening workshops is to sponsor a series of information sessions on regular meeting dates (for example, the first Thursday of each month). One month the workshop could be about reducing children's exposure to lead, another month it could be on easy ways to recycle, the next month on asbestos, etc. Much of the information contained in this guidance manual can become the basis for the workshop. Supplement this information with pamphlets and brochures from organizations like U.S. EPA and IDEM, or environmental and health groups. Often these organizations can spice up a workshop by providing videos or guest speakers. It is a good idea to rely on outside organizations for their expertise. It will take the pressure of answering technical questions off of you.

Mock Self Assessment as an Example Home Audit

Another way to teach parents about environmental hazards is to do it the same way the child care staff learned--by conducting a self assessment. The child care staff can conduct a sample child care facility audit and walk parents through the facility. Parents can then take what they learned and conduct a self assessment in their own home. Conducting a mock self assessment for parents has two benefits: 1) it will teach parents how to look for environmental hazards in their home and how to reduce those risks; 2) it

will show parents that their children are protected in the child care facility. By conducting a mock self assessment, parents will learn in a visual, interactive manner that is more interesting than reading a pamphlet or listening to a lecture. You can contact IDEM for additional copies of the self assessment you completed. Again, it is a good idea to have supplemental information available about potential environmental, health, and safety threats at the mock self assessment.

Here are some tips for conducting evening workshops:

1. Hold the workshop at the same time parents pick up their children. This time should help increase attendance.
2. Continue to provide child care throughout the workshop so parents can focus on the information.
3. Provide snacks. It will be dinner time for many families. Consider having a pot-luck dinner. It will allow you to interact with the parents in a more social manner. This will help build a sense of community around the child care facility.
4. Have information parents can take home and read later to reinforce their learning.
5. Be prepared to answer questions about what the child care facility has done to address the problem(s) being discussed.
6. When explaining environmental risks, be sure to include the following information:
   a. Define the risk. What is it? Where does it come from?
   b. Why is it a problem? Why should one be concerned? What are the health risks?
   c. How are parents and children exposed to the risk? How do people come in contact with the problem?
   d. What are the symptoms of exposure to the problem? What should parents look for in their children?
   e. How can parents reduce exposure to the risk, or reduce the problem in their home?

Newsletters

Newsletter articles are an easy and inexpensive way to inform parents about possible environmental hazards. The options for content and format are limited only by creativity.

Here are some ideas for telling parents about environmental hazards in a newsletter.

- Write an environmental column. Highlight an environmental issue of the week, month, quarter (however often the newsletter is printed). This way the newsletter can include detailed information about the issue.
- Discuss changes the child care facility made or is making to protect children from environmental hazards.
- Inform parents about environmental curriculum the facility is using to teach children about the environment. Teach parents about the same issues so that they can reinforce the lesson at home. For example, if your facility uses a game to teach children about recycling, then explain the game to parents and provide information about recycling and how parents can recycle at home.
- Give advice about how parents can reduce environmental hazards in the home.
- Provide a “Where to find more information” box that gives hotline phone numbers and other information sources for parents who have questions.